IN THE CLAIMS

Please **cancel** claims 1-20 without prejudice and **add** new claims 21-39 as shown in the Status of the Claims section, *infra*. No new matter has been added.

New claim 21 is derived from original claims 1, 6, and 9.
New claim 22 corresponds to original claim 3.
New claim 23 is derived from original claims 4 and 5.
New claim 24 corresponds to original claim 2.
New claim 25 corresponds to original claims 6 and 9.
New claim 26 corresponds to original claim 13.
New claim 27 is supported on page 50, lines 6-15 of the specification.
New claim 28 is supported on page 51, lines 16-23 of the specification.
New claim 29 corresponds to original claim 8.
New claim 30 is derived from original claim 11.
New claim 31 is derived from original claims 12 and 17.
New claim 32 corresponds to original claim 2.
New claim 33 corresponds to original claim 14.
New claim 34 corresponds to original claims 15 and 16.
New claim 35 corresponds to original claim 17.
New claim 36 corresponds to original claim 13.
New claim 37 is supported on page 51, lines 6-15 of the specification.
New claim 38 is supported on page 51, lines 16-23 of the specification.
New claim 39 corresponds to original claims 19 and 20.

STATUS OF THE CLAIMS

Claims 1-20 (canceled).

Claim 21 (new). An aberration detection device in which a light beam emitted from a light source is focused on an information recording layer of an optical recording medium through a dual lens objective lens constituted by a first lens element and a second lens element, and in which a light beam reflected from the information recording layer is incident on light beam separation means through the dual lens objective lens so as to separate the light beam into a first light beam, which includes a light axis of the light beam, and a second beam, which does not include the light axis of the light beam, and thereby detect a spherical aberration of the dual lens objective lens,

said aberration detection device comprising:

spherical aberration detection means for detecting the spherical aberration in accordance with at least one of focus positions of the two light beams separated by said light beam separation means,

said light beam separation means including a first region for separating the first light beam, and a second region for separating the second light beam, and

said first and second regions are separated by a boundary, and said boundary is formed as a circle or an arc centered on the light axis of the light beam, having a radius virtually 70 percent of an effective radius of the light beam.

Claim 22 (new). The aberration detection device of claim 21, wherein:

said light beam separation means is a hologram.

Claim 23 (new). An aberration detection device in which a light beam emitted from a light source is focused on an information recording layer of an optical recording medium through a dual lens objective lens constituted by a first lens element and a

second lens element, and in which a light beam reflected from the information recording layer is incident on light beam separation means through the dual lens objective lens so as to separate the light beam into a first light beam, which includes a light axis of the light beam, and a second beam, which does not include the light axis of the light beam, and thereby detect a spherical aberration of the dual lens objective lens,

said aberration detection device comprising:

a first focus error detection section for outputting a first error signal, which is obtained by detecting a focus position deviation of the first light beam from the first light beam according to a beam size method for detecting a focus position deviation by utilizing changes in the beam size; and

a second focus error detection section for outputting a second error signal, which is obtained by detecting a focus position deviation of the second light beam from the second light beam according to the beam size method,

wherein a spherical aberration error signal SAES showing an amount of the spherical aberration of said dual lens objective lens is obtained from an equation:

SAES = F1 - FES x k1 (k1: a coefficient), or

SAES = F2 - FES x k2 (k2: a coefficient),

where F1 is the first error signal, F2 is the second error signal, and FES is F1 + F2, and

the spherical aberration is detected by the spherical aberration error signal SAES.

Claim 24 (new). The aberration detection device of claim 23, wherein:

said light beam separation means includes a first region for separating the first light beam, and a second region for separating the second light beam; and

said first and second regions are separated by a boundary, and said boundary is formed as a circle or an arc.

Claim 25 (new). The aberration detection device of claim 24, wherein:

said boundary is formed as a circle or an arc centered on the light axis of the light beam, having a radius virtually 70 percent of an effective radius of the light beam.

Claim 26 (new). The aberration detection device of claim 23, wherein:

said light beam separation means includes a first region for separating the first light beam from the light beam, and a second region for separating the second light beam from the light beam; and

said first region and said second region are separated by a separation line which at least partially includes a straight line virtually parallel to a direction orthogonal to a track direction of said optical recording medium.

Claim 27 (new). The aberration detection device of claim 26, wherein:

the separation line includes an arc in addition to the straight line virtually parallel to a direction orthogonal to a track direction of said optical recording medium.

Claim 28 (new). The aberration detection device of claim 26, wherein the separation line is a straight line.

Claim 29. The aberration detection device of claim 23, wherein said light beam separation means is a hologram.

Claim 30 (new). An aberration detection method in which a light beam emitted from a light source is focused on an information recording layer of an optical recording medium through a dual lens objective lens constituted by a first lens element and a second lens element, and in which a light beam reflected from the information

recording layer is incident on light beam separation means through the dual lens objective lens so as to separate the light beam into a first light beam, which includes a light axis of the light beam, and a second beam, which does not include the light axis of the light beam, and thereby detect a spherical aberration of the dual lens objective lens,

wherein said light beam separation means includes a first region for separating the first light beam, and a second region for separating the second light beam, and

wherein said first and second regions are separated by a boundary, and said boundary is formed as a circle or an arc centered on the light axis of the light beam, having a radius virtually 70 percent of an effective radius of the light beam,

said method comprising the step of detecting the spherical aberration in accordance with at least one of focus positions of the two light beams separated by the light beam separation means.

Claim 31 (new). An optical pick-up device comprising:

a light source;

a focusing optical system for focusing a light beam emitted from said light source onto an optical recording medium;

light beam separation means for separating the light beam reflected from the optical recording medium and passed through the focusing optical system, into a first light beam, which includes a light axis of the light beam, and a second beam, which does not include the light axis of the light beam;

spherical aberration detection means for detecting the spherical aberration in accordance with at least one of focus positions of the two light beams separated by said light beam separation means; and

spherical aberration correction means for correcting the spherical aberration detected by said spherical aberration detection means,

said light beam separation means including a first region for separating the first light beam, and a second region for separating the second light beam, and

said first and second regions being separated by a boundary, and said boundary being formed as a circle or an arc centered on the light axis of the light beam, having a radius virtually 70 percent of an effective radius of the light beam.

Claim 32 (new). The optical pick-up device of claim 31, wherein said light beam separation means is a hologram.

Claim 33 (new). An optical pick-up device comprising:

a light source;

a focusing optical system for focusing a light beam emitted from said light source onto an optical recording medium;

light beam separation means for separating a light beam reflected from said optical recording medium and passing through said focusing optical system, into a first light beam, which includes a light axis of the light beam, and a second light beam, which does not include the light axis of the light beam;

focus position deviation amount detection means for detecting a deviation amount of at least one of focus positions of the first light beam and the second light beam separated by said light beam separation means; and

correction means for correcting a spherical aberration of said focusing optical system in accordance with the deviation amount of the focus position detected by said focus position deviation amount detection means,

said focus position deviation amount detection means including:

a first focus error detection section for detecting a focus position deviation of the first light beam from the first light beam, and outputting a first error signal; and

a second focus error detection section for detecting a focus position deviation of the second light beam from the second light beam, and outputting a second error signal,

wherein a spherical aberration error signal SAES showing an amount of the spherical aberration of said focusing optical system is obtained from an equation:

SAES = Fl - FES x k1 (k1: a coefficient), or

SAES = F2 - FES x k2 (k2: a coefficient),

where F1 is the first error signal, F2 is the second error signal, and FES, which is a focus error signal showing an amount of a focus error of said focusing optical system, is F1 + F2, and

said correction means corrects the spherical aberration in accordance with the spherical aberration error signal SAES obtained by said focus position deviation amount detection means.

Claim 34 (new). The optical pick-up device of claim 33, wherein:

said light beam separation means includes a first region for separating the first light beam, and a second region for separating the second light beam; and

said first and second regions are separated by a boundary, and said boundary is formed as a circle or an arc.

Claim 35 (new). The optical pick-up device of claim 34, wherein:

said boundary is formed as a circle or an arc centered on the light axis of the light beam, having a radius virtually 70 percent of an effective radius of the light beam.

Claim 36 (new). The optical pick-up device of claim 33, wherein:

said light beam separation means includes a first region for separating the first light beam from the light beam, and a second region for separating the second light beam from the light beam; and

said first region and said second region are separated by a separation line which at least partially includes a straight line virtually parallel to a direction orthogonal to a track direction of said optical recording medium.

Claim 37 (new). The optical pick-up device of claim 36, wherein:

the separation line includes an arc in addition to the straight line virtually parallel to a direction orthogonal to a track direction of said optical recording medium.

Claim 38 (new). The optical pick-up device of claim 36, wherein the separation line is a straight line.

Claim 39 (new). The optical pick-up device of claim 33, wherein:

focus position deviation amount detection means obtains the spherical aberration error signal SAES, taking the focusing error signal FES as zero.